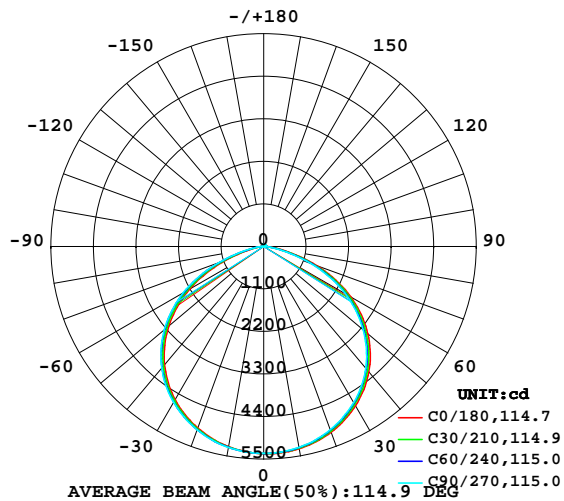
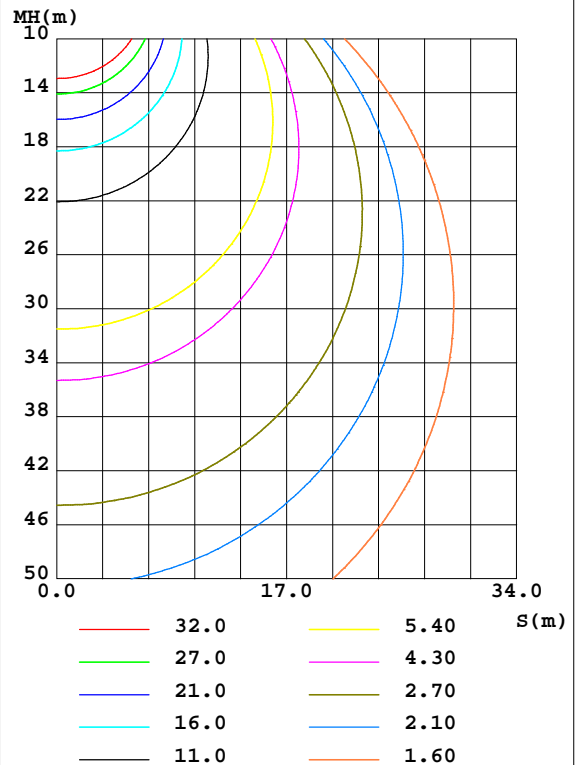


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:220.0V I:0.5038A P:104.7W PF:0.9444 Lamp Flux:15406.3x1 lm		
NAME: HB2200-100W	TYPE:LED	WEIGHT:
SPEC.:G5 360	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 147.19 lm/W			
MODEL	HB2200-130W	Imax(cd)	5363	S/MH(C0/180)	1.27
NOMINAL POWER(W)	130	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	15406	$\eta$ UP,DN(C0-180)	0.8,49.2
NOMINAL FLUX(lm)	15406.3	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.7,49.3
LAMPS INSIDE	1	$\eta$ up(%)	1.5	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220	$\eta$ down(%)	98.5	CIBSE SHR MAX	1.35

**LUMINOUS INTENSITY DISTRIBUTION DIAGRAM**

**C0 PLANE ISOLUX DIAGRAM (UNIT:lx)**


**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:AHK**  
**Test Date:6 OCTOBER 2018**

**$\gamma$  Range: 0 - 180DEG**  
 **$\gamma$  Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity:65.0%**  
**Test Distance:8.000m [K=1.0000]**  
**Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080**

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	5309	5289	5275	5248	5253	5268	5275	5290	0- 10	507.1	507.1	3.29,3.29
20	5110	5070	5043	4992	4995	5025	5044	5087	10- 20	1463	1970	12.8,12.8
30	4751	4698	4661	4584	4577	4630	4658	4724	20- 30	2246	4216	27.4,27.4
40	4230	4156	4107	4005	3990	4061	4102	4200	30- 40	2756	6972	45.3,45.3
50	3514	3424	3362	3230	3202	3298	3359	3478	40- 50	2895	9867	64,64
60	2599	2504	2431	2256	2215	2332	2408	2552	50- 60	2594	12461	80.9,80.9
70	1465	1376	1301	1088	1035	1160	1244	1405	60- 70	1826	14287	92.7,92.7
80	422.0	346.9	297.6	212.9	189.5	240.3	291.6	392.0	70- 80	765.4	15053	97.7,97.7
90	36.14	30.86	36.14	33.14	27.27	28.22	30.33	30.27	80- 90	125.2	15178	98.5,98.5
100	24.94	25.00	27.15	26.16	20.42	19.56	19.16	18.42	90-100	25.19	15203	98.7,98.7
110	30.46	31.27	31.90	32.37	26.41	25.53	25.49	24.33	100-110	26.82	15230	98.9,98.9
120	36.53	37.46	38.77	38.88	32.48	31.81	32.41	30.81	110-120	31.41	15261	99.1,99.1
130	42.12	42.75	44.41	44.07	38.16	37.20	38.09	35.94	120-130	33.79	15295	99.3,99.3
140	47.63	48.08	48.76	49.15	44.04	42.93	42.80	41.48	130-140	33.17	15328	99.5,99.5
150	53.11	53.60	53.99	54.69	50.19	49.30	48.83	47.77	140-150	30.39	15359	99.7,99.7
160	58.06	58.44	58.90	59.24	56.05	55.35	55.01	54.04	150-160	24.98	15384	99.9,99.9
170	61.85	61.99	62.08	62.30	60.87	60.37	59.87	59.29	160-170	16.70	15400	100,100
180	63.19	63.25	62.83	62.82	63.21	63.25	62.86	62.81	170-180	5.909	15406	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 8428.4 lm

%lum = 54.7%

%lamp = 54.7%

Conical surface Flux(120deg): 12461 lm

%lum = 80.9%

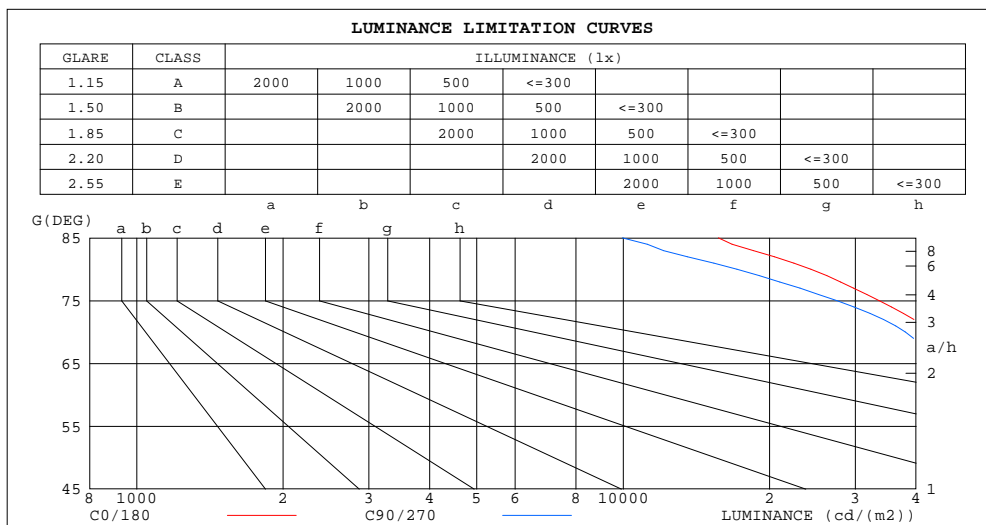
%lamp = 80.9%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AHK  
Test Date:6 OCTOBER 2018

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351  
Humidity:65.0%  
Test Distance:8.000m [K=1.0000]  
Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080

## LUMINANCE LIMITATION CURVES

Test:U:220.0V I:0.5038A P:104.7W PF:0.9444 Lamp Flux:15406.3x1 lm		
NAME: HB2200-100W	TYPE:LED	WEIGHT:
SPEC.:G5 360	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



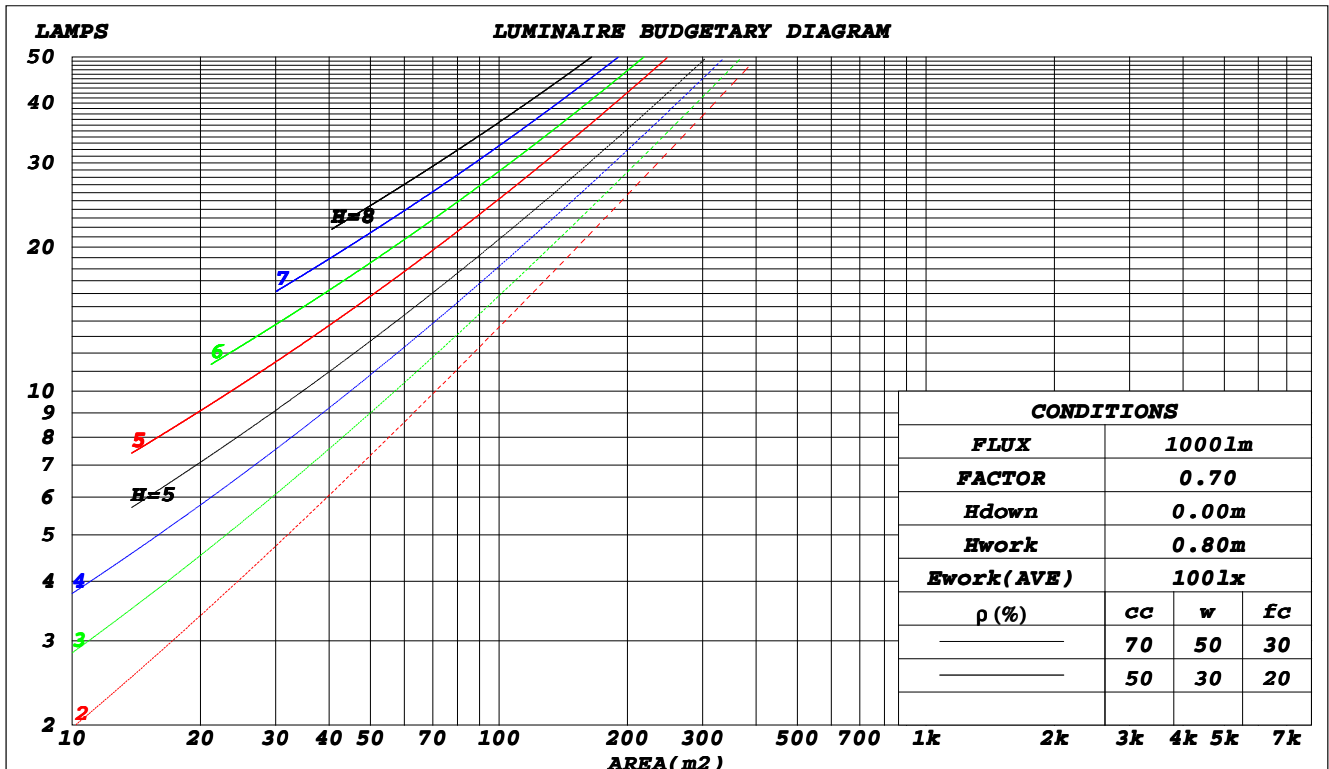
**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: AHK**  
**Test Date: 6 OCTOBER 2018**

**$\gamma$  Range: 0 - 180DEG**  
 **$\gamma$  Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=1.0000]**  
**Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080**

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.0V I:0.5038A P:104.7W PF:0.9444 Lamp Flux:15406.3x1 lm		
NAME: HB2200-100W	TYPE:LED	WEIGHT:
SPEC.:G5 360	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.99
1.0	1.05	1.01	.97	1.02	.99	.95	.98	.95	.92	.94	.91	.89	.90	.88	.86	.84
2.0	.92	.85	.79	.90	.84	.78	.86	.81	.76	.82	.78	.74	.79	.76	.73	.70
3.0	.80	.73	.66	.79	.71	.66	.76	.69	.64	.73	.67	.63	.70	.65	.62	.59
4.0	.71	.63	.56	.70	.62	.56	.67	.60	.55	.65	.59	.54	.62	.57	.53	.51
5.0	.64	.55	.48	.62	.54	.48	.60	.53	.47	.58	.52	.47	.56	.50	.46	.44
6.0	.57	.48	.42	.56	.48	.42	.54	.47	.41	.52	.46	.41	.51	.45	.40	.38
7.0	.52	.43	.37	.51	.43	.37	.49	.42	.36	.48	.41	.36	.46	.40	.36	.34
8.0	.47	.39	.33	.46	.38	.33	.45	.38	.33	.44	.37	.32	.42	.36	.32	.30
9.0	.43	.35	.30	.43	.35	.30	.41	.34	.29	.40	.34	.29	.39	.33	.29	.27
10.0	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.26	.36	.30	.26	.24



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:AHK  
 Test Date:6 OCTOBER 2018

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351  
 Humidity:65.0%  
 Test Distance:8.000m [K=1.0000]  
 Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080

**WEC AND CCEC**

Test:U:220.0V I:0.5038A P:104.7W PF:0.9444 Lamp Flux:15406.3x1 lm		
NAME: HB2200-100W	TYPE:LED	WEIGHT:
SPEC.:G5 360	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0	
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
$\rho_{fc}$	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.289	.164	.052	.281	.161	.051	.267	.153	.049	.255	.147	.047	.243	.141	.045		
2.0	.278	.152	.047	.271	.150	.046	.259	.144	.045	.248	.139	.043	.237	.134	.042		
3.0	.261	.139	.042	.255	.136	.041	.244	.132	.040	.234	.128	.039	.224	.124	.038		
4.0	.242	.126	.037	.237	.124	.037	.228	.121	.036	.218	.117	.035	.210	.114	.035		
5.0	.225	.115	.033	.221	.113	.033	.212	.110	.033	.204	.108	.032	.196	.105	.032		
6.0	.210	.105	.030	.206	.104	.030	.198	.102	.030	.191	.099	.029	.184	.097	.029		
7.0	.196	.097	.027	.192	.096	.027	.185	.094	.027	.179	.092	.027	.173	.090	.026		
8.0	.183	.090	.025	.180	.089	.025	.174	.087	.025	.168	.085	.025	.162	.083	.024		
9.0	.172	.083	.023	.169	.082	.023	.164	.081	.023	.158	.079	.023	.153	.078	.022		
10.0	.162	.078	.022	.159	.077	.021	.154	.076	.021	.149	.074	.021	.145	.073	.021		

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.202	.202	.202	.172	.172	.172	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.190	.168	.147	.163	.144	.127	.111	.099	.088	.064	.057	.051	.021	.018	.016	
2.0	.182	.143	.111	.156	.123	.096	.107	.085	.067	.062	.050	.039	.020	.016	.013	
3.0	.174	.126	.087	.149	.108	.076	.103	.075	.053	.059	.044	.031	.019	.014	.010	
4.0	.167	.112	.071	.143	.097	.062	.098	.068	.043	.057	.040	.026	.018	.013	.008	
5.0	.160	.102	.060	.137	.088	.052	.094	.062	.037	.055	.036	.022	.018	.012	.007	
6.0	.153	.094	.051	.131	.081	.045	.091	.057	.032	.053	.033	.019	.017	.011	.006	
7.0	.146	.087	.045	.126	.075	.039	.087	.053	.028	.050	.031	.017	.016	.010	.006	
8.0	.140	.081	.041	.120	.070	.035	.083	.049	.025	.048	.029	.015	.016	.010	.005	
9.0	.134	.076	.037	.115	.066	.032	.080	.046	.023	.047	.027	.014	.015	.009	.005	
10.0	.128	.072	.034	.111	.062	.030	.077	.044	.021	.045	.026	.013	.015	.009	.004	

**C Range:** 0 - 360DEG  
**C Interval:** 15.0DEG  
**Test Speed:** HIGH  
**Temperature:** 25.3DEG  
**Operators:** AHK  
**Test Date:** 6 OCTOBER 2018

**$\gamma$  Range:** 0 - 180DEG  
 **$\gamma$  Interval:** 1.0DEG  
**Test System:** EVERFINE GO-2000A\_V1 SYSTEM V2.0.351  
**Humidity:** 65.0%  
**Test Distance:** 8.000m [K=1.0000]  
**Remarks:** HB2000-100W-A100-G5 288Chip\_110D#1\_18080

**UGR(Unified Glare Rating) Table**

Test:U:220.0V I:0.5038A P:104.7W PF:0.9444 Lamp Flux:15406.3x1 lm										
NAME: HB2200-100W					TYPE:LED			WEIGHT:		
SPEC.:G5 360					DIM.:			SERIAL No.:		
MFR.: ICEPIPE					SUR.:			Shielding Angle:		
<b>ceiling/cavity</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>walls</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>working plane</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>	<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>x = 2H y = 2H</b>	<b>26.9</b>	<b>28.4</b>	<b>27.2</b>	<b>28.6</b>	<b>28.8</b>	<b>26.6</b>	<b>28.1</b>	<b>26.9</b>	<b>28.3</b>	<b>28.5</b>
<b>3H</b>	<b>28.2</b>	<b>29.6</b>	<b>28.6</b>	<b>29.9</b>	<b>30.1</b>	<b>27.8</b>	<b>29.2</b>	<b>28.1</b>	<b>29.4</b>	<b>29.7</b>
<b>4H</b>	<b>28.6</b>	<b>29.9</b>	<b>29.0</b>	<b>30.2</b>	<b>30.5</b>	<b>28.1</b>	<b>29.4</b>	<b>28.5</b>	<b>29.7</b>	<b>30.0</b>
<b>6H</b>	<b>28.8</b>	<b>30.0</b>	<b>29.2</b>	<b>30.3</b>	<b>30.6</b>	<b>28.2</b>	<b>29.4</b>	<b>28.6</b>	<b>29.7</b>	<b>30.0</b>
<b>8H</b>	<b>28.8</b>	<b>30.0</b>	<b>29.2</b>	<b>30.3</b>	<b>30.6</b>	<b>28.2</b>	<b>29.4</b>	<b>28.6</b>	<b>29.7</b>	<b>30.0</b>
<b>12H</b>	<b>28.8</b>	<b>29.9</b>	<b>29.2</b>	<b>30.2</b>	<b>30.6</b>	<b>28.2</b>	<b>29.3</b>	<b>28.5</b>	<b>29.6</b>	<b>29.9</b>
<b>4H 2H</b>	<b>27.4</b>	<b>28.7</b>	<b>27.8</b>	<b>29.0</b>	<b>29.3</b>	<b>27.2</b>	<b>28.5</b>	<b>27.5</b>	<b>28.8</b>	<b>29.1</b>
<b>3H</b>	<b>28.9</b>	<b>30.0</b>	<b>29.3</b>	<b>30.3</b>	<b>30.7</b>	<b>28.5</b>	<b>29.7</b>	<b>28.9</b>	<b>30.0</b>	<b>30.3</b>
<b>4H</b>	<b>29.4</b>	<b>30.4</b>	<b>29.8</b>	<b>30.7</b>	<b>31.1</b>	<b>28.9</b>	<b>29.9</b>	<b>29.3</b>	<b>30.3</b>	<b>30.6</b>
<b>6H</b>	<b>29.6</b>	<b>30.5</b>	<b>30.0</b>	<b>30.9</b>	<b>31.3</b>	<b>29.1</b>	<b>30.0</b>	<b>29.5</b>	<b>30.3</b>	<b>30.7</b>
<b>8H</b>	<b>29.7</b>	<b>30.5</b>	<b>30.1</b>	<b>30.9</b>	<b>31.3</b>	<b>29.1</b>	<b>29.9</b>	<b>29.5</b>	<b>30.3</b>	<b>30.7</b>
<b>12H</b>	<b>29.7</b>	<b>30.4</b>	<b>30.1</b>	<b>30.8</b>	<b>31.3</b>	<b>29.0</b>	<b>29.8</b>	<b>29.5</b>	<b>30.2</b>	<b>30.6</b>
<b>8H 4H</b>	<b>29.5</b>	<b>30.3</b>	<b>29.9</b>	<b>30.7</b>	<b>31.1</b>	<b>29.0</b>	<b>29.9</b>	<b>29.5</b>	<b>30.3</b>	<b>30.7</b>
<b>6H</b>	<b>29.8</b>	<b>30.5</b>	<b>30.2</b>	<b>30.9</b>	<b>31.4</b>	<b>29.2</b>	<b>29.9</b>	<b>29.7</b>	<b>30.4</b>	<b>30.8</b>
<b>8H</b>	<b>29.9</b>	<b>30.5</b>	<b>30.3</b>	<b>30.9</b>	<b>31.4</b>	<b>29.3</b>	<b>29.9</b>	<b>29.8</b>	<b>30.3</b>	<b>30.8</b>
<b>12H</b>	<b>29.9</b>	<b>30.4</b>	<b>30.4</b>	<b>30.9</b>	<b>31.4</b>	<b>29.3</b>	<b>29.8</b>	<b>29.8</b>	<b>30.3</b>	<b>30.8</b>
<b>12H 4H</b>	<b>29.4</b>	<b>30.2</b>	<b>29.9</b>	<b>30.6</b>	<b>31.0</b>	<b>29.0</b>	<b>29.8</b>	<b>29.5</b>	<b>30.2</b>	<b>30.6</b>
<b>6H</b>	<b>29.8</b>	<b>30.4</b>	<b>30.3</b>	<b>30.8</b>	<b>31.3</b>	<b>29.2</b>	<b>29.8</b>	<b>29.7</b>	<b>30.3</b>	<b>30.8</b>
<b>8H</b>	<b>29.9</b>	<b>30.4</b>	<b>30.4</b>	<b>30.9</b>	<b>31.4</b>	<b>29.3</b>	<b>29.8</b>	<b>29.8</b>	<b>30.3</b>	<b>30.8</b>
<b>Variations with the observer position at spacings:</b>										
<b>S = 1.0H</b>	<b>+ 0.2 / - 0.3</b>					<b>+ 0.2 / - 0.3</b>				
<b>1.5H</b>	<b>+ 0.2 / - 0.4</b>					<b>+ 0.2 / - 0.4</b>				
<b>2.0H</b>	<b>+ 0.3 / - 0.4</b>					<b>+ 0.3 / - 0.3</b>				

CIE Pub.117 Corrected 15406 lm Total Lamp Luminous Flux.(8log(F/F0) = 9.5)

**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:AHK**  
**Test Date:6 OCTOBER 2018**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity:65.0%**  
**Test Distance:8.000m [K=1.0000]**  
**Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080**

## UTILIZATION FACTORS TABLE

Test:U:220.0V I:0.5038A P:104.7W PF:0.9444 Lamp Flux:15406.3x1 lm		
NAME: HB2200-100W	TYPE:LED	WEIGHT:
SPEC.:G5 360	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

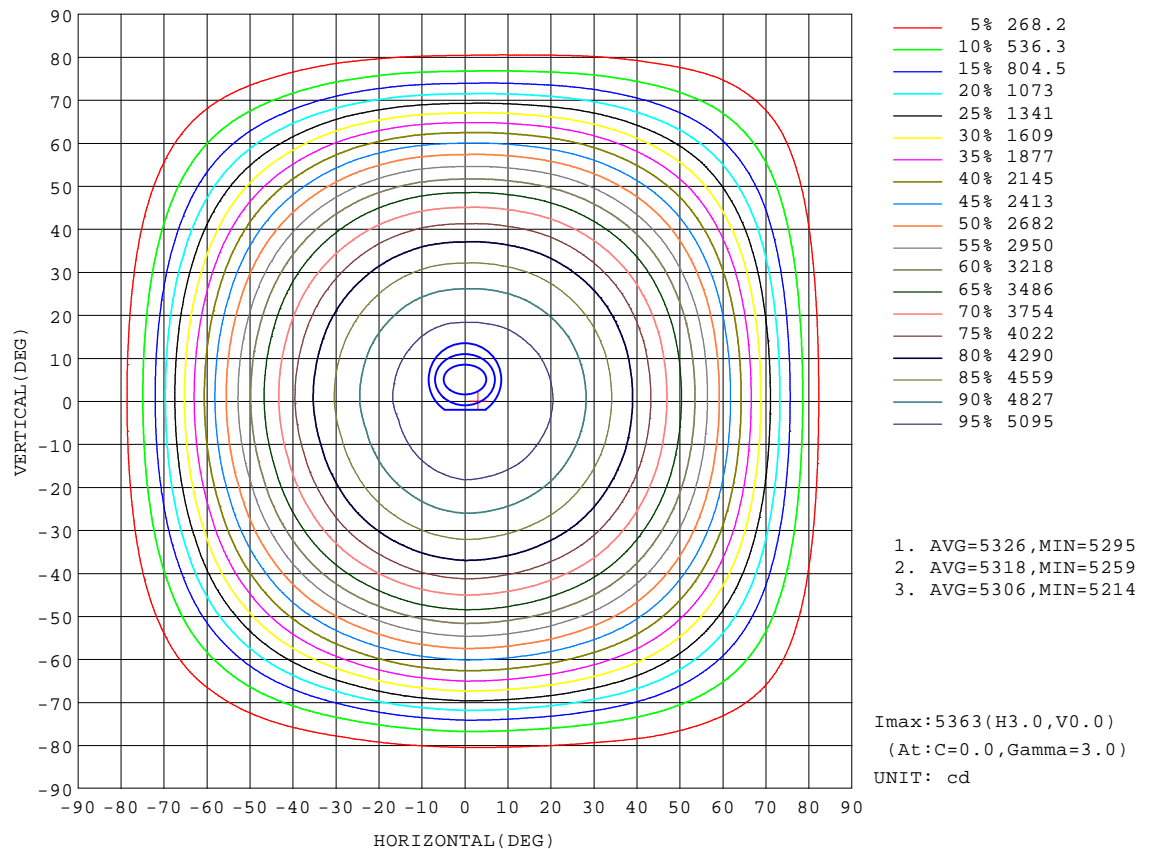
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	46	39	57	46	39	56	45	39	32
0.80	68	56	49	67	56	49	65	55	48	42
1.00	77	66	59	75	65	58	73	66	58	50
1.25	84	74	67	82	73	66	79	71	65	58
1.50	89	79	72	87	78	72	84	76	71	63
2.00	96	87	81	94	86	80	90	84	79	71
2.50	99	92	86	97	91	85	93	88	83	75
3.00	103	96	91	101	95	90	96	92	87	79
4.00	107	101	97	104	99	95	100	96	93	83
5.00	109	104	101	106	102	99	102	99	96	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AHK  
Test Date:6 OCTOBER 2018

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351  
Humidity:65.0%  
Test Distance:8.000m [K=1.0000]  
Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080

**ISOCANDELA DIAGRAM**

Test:U:220.0V I:0.5038A P:104.7W PF:0.9444 Lamp Flux:15406.3x1 lm		
NAME: HB2200-100W	TYPE:LED	WEIGHT:
SPEC.:G5 360	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



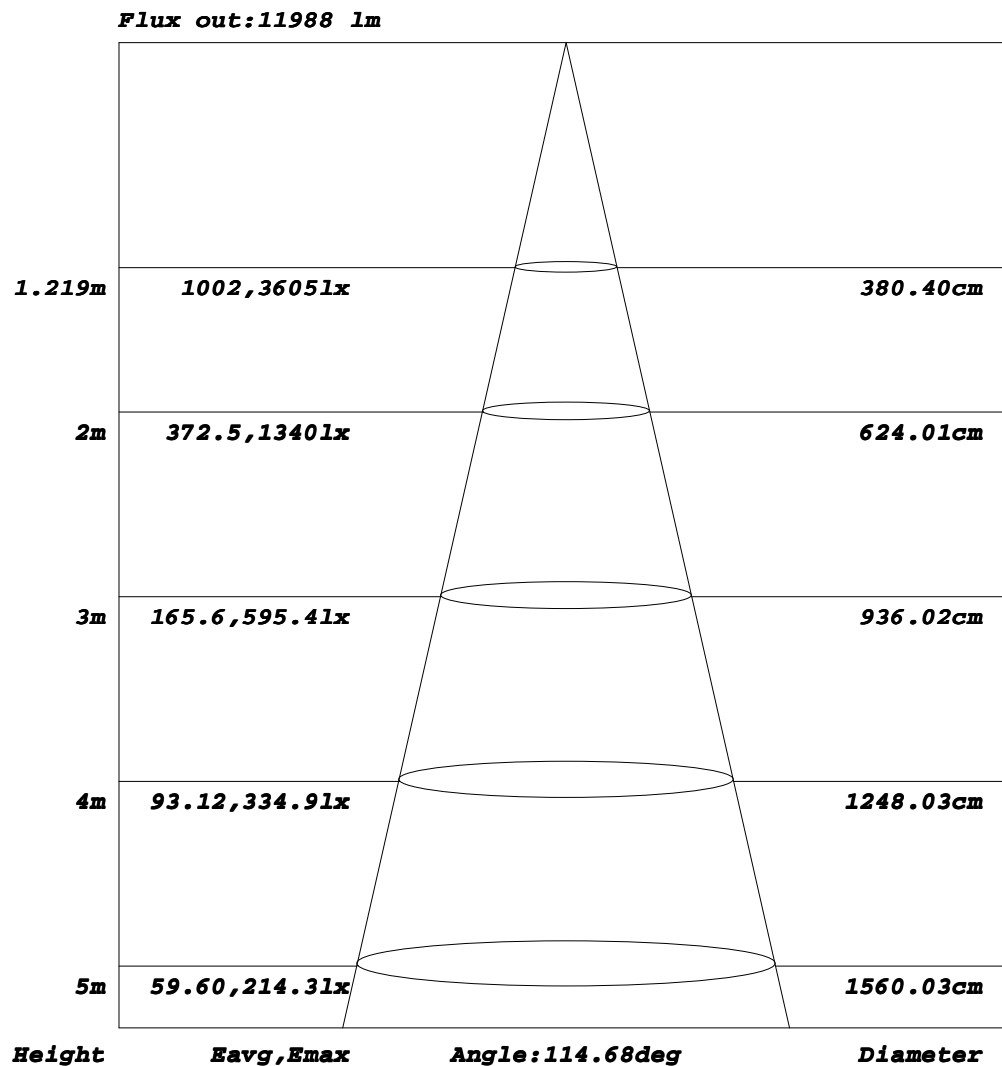
**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:AHK**  
**Test Date:6 OCTOBER 2018**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity:65.0%**  
**Test Distance:8.000m [K=1.0000]**  
**Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080**



**AAI Figure**

Test:U:220.0V I:0.5038A P:104.7W PF:0.9444 Lamp Flux:15406.3x1 lm		
NAME: HB2200-100W	TYPE:LED	WEIGHT:
SPEC.:G5 360	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



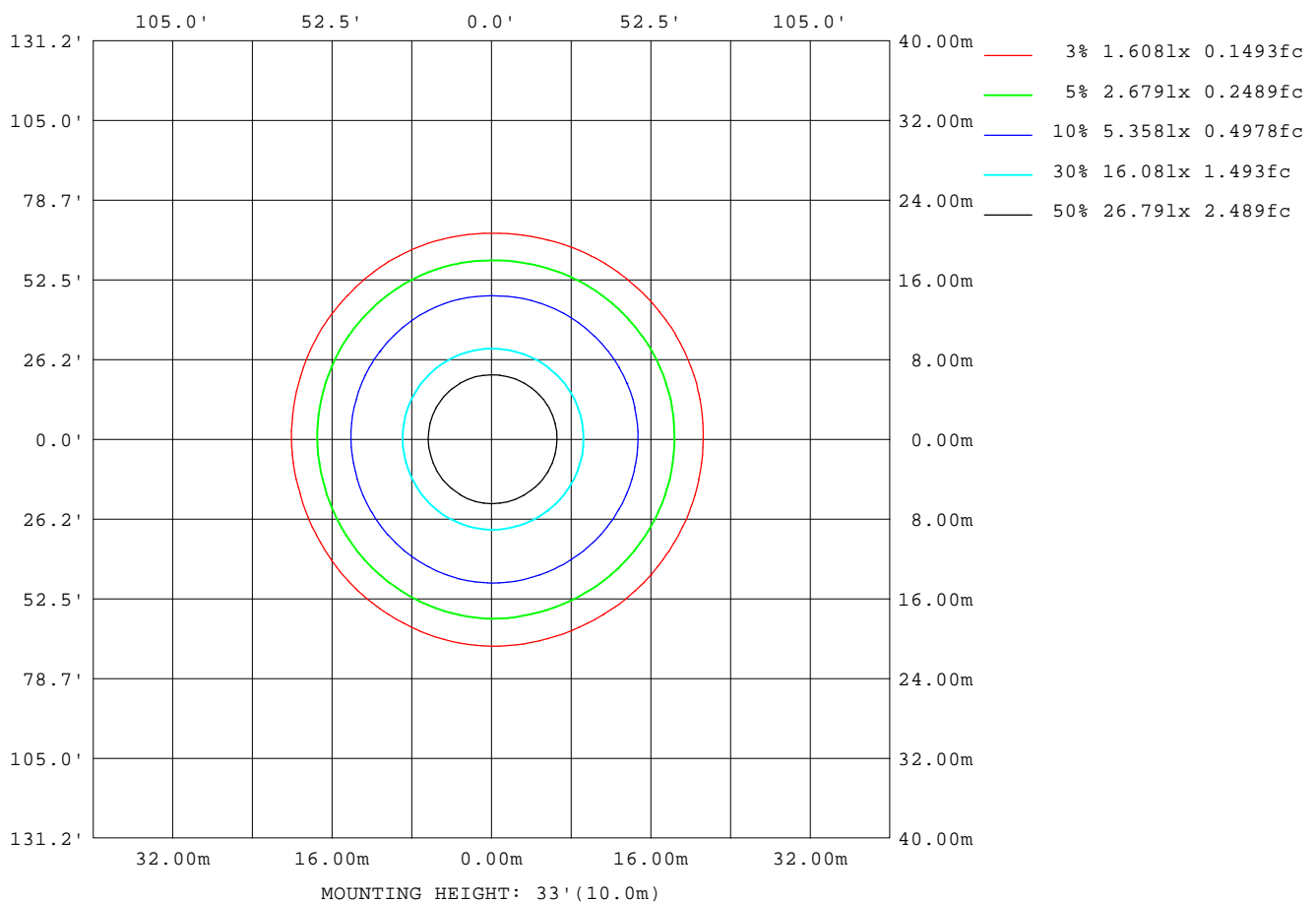
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: AHK**  
**Test Date: 6 OCTOBER 2018**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=1.0000]**  
**Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080**

**ISOLUX DIAGRAM**

Test:U:220.0V I:0.5038A P:104.7W PF:0.9444 Lamp Flux:15406.3x1 lm		
NAME: HB2200-100W	TYPE:LED	WEIGHT:
SPEC.:G5 360	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:



**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: AHK**  
**Test Date: 6 OCTOBER 2018**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=1.0000]**  
**Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080**

## LED Avg.L Report

Test:U:220.0V I:0.5038A P:104.7W PF:0.9444 Lamp Flux:15406.3x1 lm		
NAME: HB2200-100W	TYPE:LED	WEIGHT:
SPEC.:G5 360	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

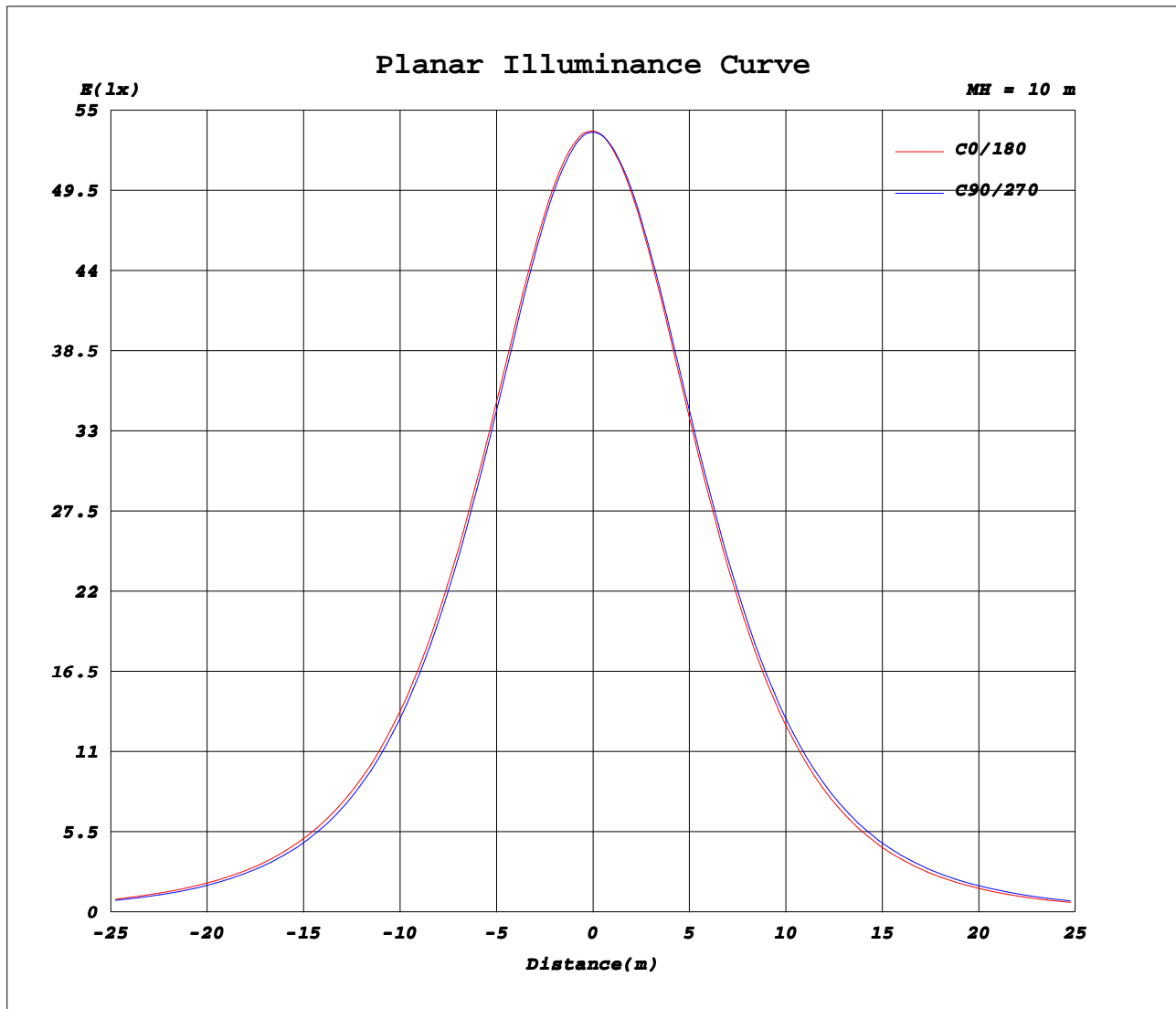
AvgL	cd/m2
L_0~180(65)av	43757
L_0~180(75)av	27013
L_0~180(85)av	10972
L_90~270(65)av	44154
L_90~270(75)av	27081
L_90~270(85)av	9511
L_45(65)av	43862
L_45(75)av	26954
L_45(85)av	9992

Standard: GB/T 29293-2012

**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:AHK**  
**Test Date:6 OCTOBER 2018**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity:65.0%**  
**Test Distance:8.000m [K=1.0000]**  
**Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080**

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: AHK  
Test Date: 6 OCTOBER 2018

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351  
Humidity: 65.0%  
Test Distance: 8.000m [K=1.0000]  
Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080

**LUMINOUS DISTRIBUTION INTENSITY DATA**

Test:U:220.0V I:0.5038A P:104.7W PF:0.9444 Lamp Flux:15406.3x1 lm																		
NAME: HB2200-100W									TYPE:LED					WEIGHT:				
SPEC.:G5 360									DIM.:					SERIAL No.:				
MFR.: ICEPIPE									SUR.:					Shielding Angle:				

Table--1

UNIT: cd

<div> <div>C(DEG)</div> <div>γ (DEG)</div> </div>	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	5358	5354	5355	5356	5353	5354	5350	5348	5346	5343	5347	5347	5358	5354	5355	5356	5353	5354	5350
5	5351	5350	5344	5340	5335	5331	5333	5327	5321	5317	5311	5307	5325	5325	5329	5329	5332	5336	5332
10	5309	5303	5296	5289	5280	5274	5275	5265	5255	5248	5238	5236	5253	5257	5265	5268	5273	5277	5275
15	5229	5219	5211	5202	5189	5180	5177	5168	5152	5140	5129	5123	5145	5149	5158	5168	5177	5181	5179
20	5110	5097	5081	5070	5052	5042	5043	5030	5008	4992	4978	4971	4995	5001	5016	5025	5040	5046	5044
25	4949	4936	4917	4903	4884	4872	4868	4853	4827	4805	4787	4779	4805	4815	4834	4846	4864	4872	4868
30	4751	4738	4714	4698	4675	4658	4661	4641	4607	4584	4560	4551	4577	4591	4611	4630	4652	4660	4658
35	4515	4497	4473	4449	4422	4407	4406	4380	4345	4318	4289	4279	4307	4321	4348	4369	4396	4409	4404
40	4230	4210	4184	4156	4127	4108	4107	4079	4035	4005	3971	3961	3990	4006	4037	4061	4092	4109	4102
45	3899	3878	3843	3818	3781	3762	3759	3727	3679	3643	3603	3589	3625	3643	3675	3702	3740	3759	3756
50	3514	3495	3454	3424	3385	3365	3362	3323	3272	3230	3186	3168	3202	3226	3265	3298	3341	3358	3359
55	3081	3061	3018	2988	2945	2922	2918	2875	2815	2767	2718	2696	2733	2757	2801	2841	2888	2913	2905
60	2599	2575	2534	2504	2458	2433	2431	2383	2311	2256	2200	2176	2215	2238	2291	2332	2385	2412	2408
65	2061	2035	1992	1960	1913	1888	1886	1832	1749	1690	1623	1597	1638	1661	1718	1762	1821	1847	1846
70	1465	1448	1403	1376	1329	1306	1301	1243	1155	1088	1024	996	1035	1062	1115	1160	1220	1245	1244
75	869	850	812	783	739	713	711	660	601	564	525	507	529	546	584	615	661	687	691
80	422	404	373	347	315	303	298	277	238	213	188	181	190	199	221	240	273	287	292
85	137	123	117	103	92.4	88.8	86.8	79.0	70.0	63.4	57.4	56.5	54.4	56.2	60.4	60.3	67.9	74.9	79.0
90	36.1	33.4	30.7	30.9	30.6	34.3	36.1	35.7	34.4	33.1	32.0	31.7	27.3	27.6	28.4	28.2	28.4	29.9	30.3
95	23.2	22.9	22.6	23.1	24.7	27.0	27.9	27.3	25.4	24.2	24.1	24.6	18.9	18.6	18.0	17.5	17.7	19.7	20.0
100	24.9	24.9	24.8	25.0	25.6	26.5	27.2	27.4	26.7	26.2	26.5	26.7	20.4	20.2	19.8	19.6	19.3	19.2	19.2
105	27.5	27.6	27.9	28.4	28.2	28.4	28.4	28.6	28.9	29.2	29.6	29.8	23.3	23.1	22.7	22.5	22.2	22.1	22.1
110	30.5	30.6	31.0	31.3	31.6	32.0	31.9	31.9	32.1	32.4	33.0	33.0	26.4	26.2	26.0	25.5	25.2	25.2	25.5
115	33.5	33.6	33.9	34.6	35.1	35.4	35.4	35.4	35.5	35.9	35.9	35.9	29.4	29.1	28.8	28.9	28.5	28.6	28.9
120	36.5	36.6	36.7	37.5	38.4	38.9	38.8	39.0	39.1	38.9	38.7	38.9	32.5	32.1	31.6	31.8	32.0	32.2	32.4
125	39.4	39.4	39.6	40.1	41.2	42.0	42.1	42.2	42.2	41.6	41.4	41.6	35.3	35.0	34.4	34.6	35.0	35.5	35.7
130	42.1	42.2	42.3	42.8	43.5	44.3	44.4	44.6	44.5	44.1	44.1	44.4	38.2	37.8	37.3	37.2	37.6	38.0	38.1
135	44.8	45.0	45.1	45.3	45.7	46.3	46.5	46.7	46.5	46.6	46.8	47.2	41.0	40.7	40.2	40.0	39.8	40.2	40.3
140	47.6	47.9	48.0	48.1	48.3	48.7	48.8	49.0	49.1	49.1	49.6	49.8	44.0	43.6	43.2	42.9	42.6	42.7	42.8
145	50.5	50.6	50.7	50.8	51.1	51.3	51.4	51.5	51.8	51.9	52.3	52.5	47.2	46.8	46.4	46.1	45.7	45.7	45.8
150	53.1	53.3	53.3	53.6	53.8	53.9	54.0	54.1	54.4	54.7	54.9	55.0	50.2	49.9	49.5	49.3	48.9	48.7	48.8
155	55.6	55.7	55.8	56.1	56.4	56.5	56.6	56.7	57.0	57.0	57.2	57.3	53.2	52.9	52.5	52.3	52.1	51.9	52.0
160	58.1	58.2	58.2	58.4	58.7	58.9	58.9	59.0	59.1	59.2	59.3	59.4	56.1	55.8	55.5	55.3	55.2	55.0	55.0
165	60.3	60.3	60.4	60.5	60.7	60.9	60.8	60.9	60.9	61.0	61.2	61.3	58.9	58.7	58.4	58.1	57.8	57.8	57.8
170	61.8	61.8	61.8	62.0	62.3	62.3	62.1	62.1	62.3	62.3	62.4	62.4	60.9	60.8	60.7	60.4	60.1	60.0	59.9
175	62.8	62.7	62.8	63.1	63.1	63.0	62.8	62.8	62.8	63.0	63.0	62.9	62.4	62.3	62.4	62.3	62.0	61.8	61.7
180	63.2	63.2	63.2	63.3	63.1	62.9	62.8	62.8	62.8	62.8	62.7	62.5	63.2	63.2	63.2	63.2	63.1	62.9	62.9

**C Range: 0 - 360DEG**
**C Interval: 15.0DEG**
**Test Speed: HIGH**
**Temperature:25.3DEG**
**Operators:AHK**
**Test Date:6 OCTOBER 2018**
**γ Range: 0 - 180DEG**
**γ Interval: 1.0DEG**
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**
**Humidity:65.0%**
**Test Distance:8.000m [K=1.0000]**
**Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080**

**LUMINOUS DISTRIBUTION INTENSITY DATA**

Test:U:220.0V I:0.5038A P:104.7W PF:0.9444 Lamp Flux:15406.3x1 lm		
NAME: HB2200-100W	TYPE:LED	WEIGHT:
SPEC.:G5 360	DIM.:	SERIAL No.:
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Table--2

UNIT: cd

C(DEG) γ (DEG)	285	300	315	330	345														
0	5348	5346	5343	5347	5347														
5	5332	5336	5339	5341	5343														
10	5279	5288	5290	5300	5302														
15	5187	5200	5209	5221	5224														
20	5054	5075	5087	5101	5108														
25	4885	4908	4925	4943	4952														
30	4677	4706	4724	4746	4753														
35	4427	4460	4486	4512	4521														
40	4130	4170	4200	4230	4239														
45	3787	3833	3866	3900	3913														
50	3389	3442	3478	3519	3535														
55	2943	3009	3041	3087	3100														
60	2447	2507	2552	2599	2622														
65	1884	1956	2003	2061	2085														
70	1288	1358	1405	1466	1489														
75	729	786	829	874	893														
80	314	359	392	429	444														
85	88.7	103	121	132	139														
90	30.5	31.1	30.3	30.7	32.8														
95	19.1	17.5	16.5	16.4	17.0														
100	18.9	18.6	18.4	18.3	18.7														
105	21.7	21.4	21.3	21.2	21.0														
110	25.3	24.6	24.3	24.0	23.8														
115	28.7	28.0	27.7	26.9	26.7														
120	32.2	31.6	30.8	29.8	29.7														
125	35.3	34.6	33.4	32.6	32.6														
130	37.7	36.8	35.9	35.3	35.4														
135	39.8	39.0	38.6	38.3	38.3														
140	42.4	41.8	41.5	41.4	41.3														
145	45.3	44.9	44.6	44.4	44.4														
150	48.4	48.1	47.8	47.5	47.4														
155	51.6	51.2	50.9	50.5	50.5														
160	54.7	54.3	54.0	53.7	53.7														
165	57.5	57.1	56.9	56.6	56.6														
170	59.8	59.6	59.3	59.1	59.0														
175	61.6	61.6	61.4	61.1	61.0														
180	62.7	62.8	62.8	62.7	62.5														

**C Range: 0 - 360DEG**
**C Interval: 15.0DEG**
**Test Speed: HIGH**
**Temperature:25.3DEG**
**Operators:AHK**
**Test Date:6 OCTOBER 2018**
**γ Range: 0 - 180DEG**
**γ Interval: 1.0DEG**
**Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**
**Humidity:65.0%**
**Test Distance:8.000m [K=1.0000]**
**Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080**

## Photometric Data Table [cd]

G/C	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0
0.0	5358	5354	5355	5356	5353	5354	5350	5348	5346	5343
3.0	5363	5353	5353	5352	5345	5344	5346	5340	5338	5336
6.0	5346	5346	5337	5332	5327	5324	5320	5317	5309	5306
9.0	5321	5316	5309	5300	5294	5290	5287	5280	5271	5262
12.0	5281	5276	5266	5261	5248	5241	5240	5231	5220	5210
15.0	5229	5219	5211	5202	5189	5180	5177	5168	5152	5140
18.0	5160	5156	5139	5129	5112	5101	5102	5088	5072	5058
21.0	5079	5070	5053	5039	5024	5017	5009	4997	4975	4959
24.0	4985	4973	4952	4940	4919	4908	4908	4891	4865	4848
27.0	4875	4858	4841	4823	4800	4791	4790	4768	4744	4721
30.0	4751	4738	4714	4698	4675	4658	4661	4641	4607	4584
33.0	4614	4597	4574	4553	4528	4514	4514	4489	4456	4429
36.0	4463	4443	4415	4397	4365	4350	4351	4324	4289	4259
39.0	4290	4275	4243	4218	4190	4171	4170	4143	4102	4072
42.0	4104	4085	4053	4029	3994	3975	3976	3944	3898	3866
45.0	3899	3878	3843	3818	3781	3762	3759	3727	3679	3643
48.0	3675	3654	3616	3589	3549	3529	3526	3493	3438	3400
51.0	3434	3412	3372	3342	3301	3279	3277	3239	3183	3141
54.0	3173	3152	3108	3084	3037	3018	3012	2970	2910	2862
57.0	2896	2870	2832	2799	2758	2733	2731	2687	2622	2569
60.0	2599	2575	2534	2504	2458	2433	2431	2383	2311	2256
63.0	2281	2259	2215	2184	2136	2112	2109	2059	1980	1923
66.0	1942	1922	1878	1848	1798	1773	1771	1718	1631	1569
69.0	1587	1568	1524	1495	1446	1422	1418	1361	1273	1211
72.0	1224	1206	1166	1137	1091	1063	1060	996.9	911.7	853.2
75.0	869.1	849.7	812.2	782.9	739.0	712.8	711.1	660.5	601.3	563.9
78.0	582.1	559.4	523.5	492.8	455.3	435.2	436.2	405.4	363.9	333.0
81.0	351.2	333.8	305.0	287.3	257.1	243.3	240.2	217.9	186.5	167.3
84.0	175.1	165.7	148.0	136.6	125.0	113.7	117.1	100.2	87.67	78.17
87.0	76.30	71.97	65.81	62.36	57.57	56.99	56.07	52.55	46.98	44.36
90.0	36.14	33.40	30.69	30.86	30.62	34.33	36.14	35.70	34.40	33.14
93.0	21.70	21.59	21.64	22.65	25.32	28.71	30.08	29.27	26.37	24.58
96.0	23.59	23.43	23.17	23.30	24.51	26.27	27.25	27.24	25.93	24.56
99.0	24.61	24.56	24.39	24.49	25.28	26.35	27.21	27.44	26.62	25.67
102.0	25.79	25.76	25.95	26.12	26.36	26.74	27.10	27.21	27.15	27.40
105.0	27.47	27.61	28.37	28.37	28.16	28.35	28.38	28.59	28.90	29.23
108.0	29.32	29.42	30.00	30.00	30.15	30.60	30.48	30.52	30.81	31.11
111.0	31.06	31.22	31.53	31.94	32.34	32.71	32.61	32.60	32.71	33.06
114.0	32.88	33.04	33.27	33.97	34.41	34.76	34.70	34.72	34.81	35.24
117.0	34.73	34.84	35.01	35.82	36.46	36.84	36.73	36.79	36.92	37.19
120.0	36.53	36.65	36.73	37.46	38.35	38.89	38.77	38.95	39.12	38.88
123.0	38.26	38.34	38.44	39.06	40.01	40.85	40.88	41.11	41.05	40.49
126.0	39.89	40.00	40.11	40.66	41.69	42.55	42.57	42.74	42.71	42.06
129.0	41.56	41.65	41.72	42.21	43.07	43.87	43.98	44.17	44.04	43.63
132.0	43.19	43.32	43.51	43.74	44.39	45.06	45.24	45.40	45.29	45.04
135.0	44.83	44.96	45.13	45.29	45.72	46.34	46.51	46.68	46.50	46.61
138.0	46.51	46.62	46.86	46.97	47.28	47.63	47.80	47.97	48.07	48.13
141.0	48.30	48.49	48.56	48.59	48.83	49.22	49.28	49.48	49.64	49.72
144.0	49.96	50.11	50.18	50.25	50.50	50.74	50.85	51.05	51.18	51.39
147.0	51.54	51.70	51.78	51.98	52.19	52.34	52.38	52.56	52.79	53.08
150.0	53.11	53.27	53.35	53.60	53.84	53.91	53.99	54.15	54.36	54.69
153.0	54.58	54.75	54.84	55.14	55.42	55.46	55.54	55.69	55.94	56.10
156.0	56.08	56.20	56.32	56.59	56.89	57.04	57.05	57.21	57.44	57.48
159.0	57.57	57.68	57.81	58.01	58.27	58.47	58.45	58.60	58.75	58.81
162.0	58.98	59.07	59.15	59.29	59.59	59.70	59.70	59.83	59.87	60.03
165.0	60.32	60.32	60.37	60.48	60.70	60.89	60.84	60.93	60.92	61.03
168.0	61.36	61.32	61.32	61.44	61.69	61.89	61.64	61.71	61.80	61.85
171.0	62.04	62.02	62.04	62.24	62.53	62.49	62.27	62.34	62.40	62.49
174.0	62.58	62.58	62.68	62.89	62.98	62.89	62.75	62.73	62.73	62.90
177.0	63.00	63.02	63.07	63.21	63.25	63.05	62.97	62.86	62.91	63.05
180.0	63.19	63.16	63.19	63.25	63.09	62.90	62.83	62.76	62.80	62.82
G/C	150.0	165.0	180.0	195.0	210.0	225.0	240.0	255.0	270.0	285.0
0.0	5347	5347	5358	5354	5355	5356	5353	5354	5350	5348
3.0	5330	5328	5346	5343	5345	5346	5346	5343	5343	5343
6.0	5302	5296	5313	5315	5320	5320	5322	5323	5324	5325
9.0	5257	5254	5272	5272	5279	5283	5288	5292	5288	5293
12.0	5200	5195	5215	5221	5227	5234	5239	5244	5242	5249
15.0	5129	5123	5145	5149	5158	5168	5177	5181	5179	5187
18.0	5042	5035	5058	5063	5076	5086	5100	5107	5103	5113
21.0	4942	4936	4960	4965	4983	4991	5008	5016	5011	5025
24.0	4830	4822	4846	4853	4871	4886	4901	4912	4909	4923
27.0	4704	4694	4720	4730	4749	4763	4784	4794	4790	4806
30.0	4560	4551	4577	4591	4611	4630	4652	4660	4658	4677

C Range: 0 - 360DEG

C Interval: 15.0DEG

Test Speed: HIGH

Temperature: 25.3DEG

Operators: AHK

Test Date: 6 OCTOBER 2018

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351

Humidity: 65.0%

Test Distance: 8.000m [K=1.0000]

Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080

## Photometric Data Table [cd]

33.0	4405	4394	4424	4434	4460	4476	4502	4516	4513	4532
36.0	4230	4220	4248	4263	4290	4312	4340	4351	4348	4372
39.0	4038	4027	4057	4072	4102	4127	4157	4171	4166	4193
42.0	3830	3818	3851	3866	3899	3925	3959	3975	3970	3999
45.0	3603	3589	3625	3643	3675	3702	3740	3759	3756	3787
48.0	3358	3342	3378	3396	3436	3465	3506	3528	3522	3556
51.0	3095	3079	3112	3136	3177	3210	3254	3275	3273	3303
54.0	2814	2793	2832	2856	2899	2938	2983	3006	2999	3036
57.0	2516	2495	2533	2558	2607	2646	2695	2719	2713	2751
60.0	2200	2176	2215	2238	2291	2332	2385	2412	2408	2447
63.0	1859	1834	1875	1899	1954	1994	2055	2080	2078	2118
66.0	1502	1478	1518	1542	1601	1640	1705	1729	1727	1768
69.0	1145	1116	1156	1183	1237	1280	1342	1365	1366	1407
72.0	799.9	777.4	810.1	833.8	883.4	924.0	981.0	1008	1007	1051
75.0	525.2	507.0	529.2	546.2	583.8	614.9	660.7	686.9	690.7	729.4
78.0	301.0	292.7	307.8	317.9	347.3	371.6	406.8	426.7	427.0	459.6
81.0	147.4	139.3	145.6	152.7	171.4	185.4	210.0	226.6	228.5	252.3
84.0	69.85	68.64	67.55	70.72	77.39	80.47	88.94	99.36	102.2	119.8
87.0	40.14	40.23	36.85	36.96	38.58	38.59	41.94	45.30	48.71	55.12
90.0	31.98	31.72	27.27	27.57	28.40	28.22	28.38	29.88	30.33	30.50
93.0	24.19	24.83	19.89	20.06	20.08	19.42	20.30	23.14	23.80	23.15
96.0	24.28	24.55	18.93	18.66	17.98	17.58	17.75	18.72	18.85	18.21
99.0	25.88	26.16	19.91	19.67	19.24	19.00	18.76	18.66	18.71	18.34
102.0	27.67	27.86	21.49	21.24	20.91	20.72	20.43	20.30	20.28	19.98
105.0	29.64	29.81	23.30	23.08	22.72	22.49	22.19	22.10	22.12	21.74
108.0	31.78	31.79	25.21	25.01	24.82	24.28	23.99	23.94	24.14	23.89
111.0	33.58	33.63	27.00	26.83	26.58	26.19	25.82	25.83	26.20	25.98
114.0	35.34	35.34	28.79	28.59	28.28	28.33	27.84	27.93	28.22	28.01
117.0	36.98	37.15	30.65	30.33	29.98	30.11	29.94	30.02	30.28	30.01
120.0	38.66	38.90	32.48	32.13	31.65	31.81	32.04	32.17	32.41	32.16
123.0	40.31	40.57	34.22	33.85	33.38	33.48	33.87	34.33	34.52	34.15
126.0	41.91	42.18	35.87	35.55	34.99	35.16	35.59	35.99	36.20	35.81
129.0	43.50	43.84	37.58	37.25	36.74	36.72	37.13	37.48	37.67	37.25
132.0	45.16	45.52	39.31	38.98	38.49	38.30	38.42	38.82	38.98	38.50
135.0	46.77	47.15	41.04	40.67	40.24	39.95	39.82	40.17	40.34	39.84
138.0	48.47	48.69	42.82	42.43	41.98	41.78	41.47	41.56	41.70	41.26
141.0	50.19	50.33	44.68	44.28	43.88	43.51	43.22	43.31	43.41	42.96
144.0	51.77	51.98	46.55	46.19	45.77	45.40	45.10	45.10	45.19	44.74
147.0	53.38	53.54	48.44	48.07	47.65	47.39	46.96	46.91	47.01	46.54
150.0	54.88	55.01	50.19	49.88	49.49	49.30	48.87	48.73	48.83	48.41
153.0	56.28	56.40	51.94	51.68	51.28	51.14	50.81	50.63	50.72	50.31
156.0	57.59	57.72	53.72	53.44	53.09	52.93	52.72	52.58	52.58	52.28
159.0	58.91	59.02	55.47	55.23	54.92	54.76	54.57	54.41	54.43	54.15
162.0	60.12	60.20	57.22	56.99	56.72	56.47	56.28	56.13	56.13	55.86
165.0	61.24	61.27	58.89	58.71	58.42	58.10	57.84	57.78	57.76	57.55
168.0	62.08	62.11	60.15	60.12	59.89	59.52	59.23	59.13	59.08	58.99
171.0	62.56	62.55	61.21	61.17	61.06	60.78	60.50	60.40	60.24	60.15
174.0	62.94	62.82	62.10	62.05	62.08	61.92	61.66	61.53	61.34	61.26
177.0	63.03	62.89	62.93	62.88	62.86	62.79	62.49	62.34	62.21	62.14
180.0	62.67	62.49	63.21	63.17	63.20	63.25	63.08	62.90	62.86	62.74
G/C	300.0	315.0	330.0	345.0						
0.0	5346	5343	5347	5347						
3.0	5344	5344	5348	5347						
6.0	5330	5332	5336	5337						
9.0	5300	5303	5310	5311						
12.0	5259	5265	5272	5276						
15.0	5200	5209	5221	5224						
18.0	5130	5145	5154	5158						
21.0	5044	5056	5073	5079						
24.0	4946	4962	4977	4987						
27.0	4830	4850	4869	4878						
30.0	4706	4724	4746	4753						
33.0	4564	4589	4611	4622						
36.0	4407	4432	4458	4467						
39.0	4232	4259	4288	4300						
42.0	4043	4072	4104	4114						
45.0	3833	3866	3900	3913						
48.0	3606	3639	3678	3692						
51.0	3356	3395	3436	3452						
54.0	3095	3133	3178	3192						
57.0	2809	2852	2896	2917						
60.0	2507	2552	2599	2622						
63.0	2185	2231	2283	2303						
66.0	1837	1887	1945	1968						

C Range: 0 - 360DEG

C Interval: 15.0DEG

Test Speed: HIGH

Temperature: 25.3DEG

Operators: AHK

Test Date: 6 OCTOBER 2018

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351

Humidity: 65.0%

Test Distance: 8.000m [K=1.0000]

Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080

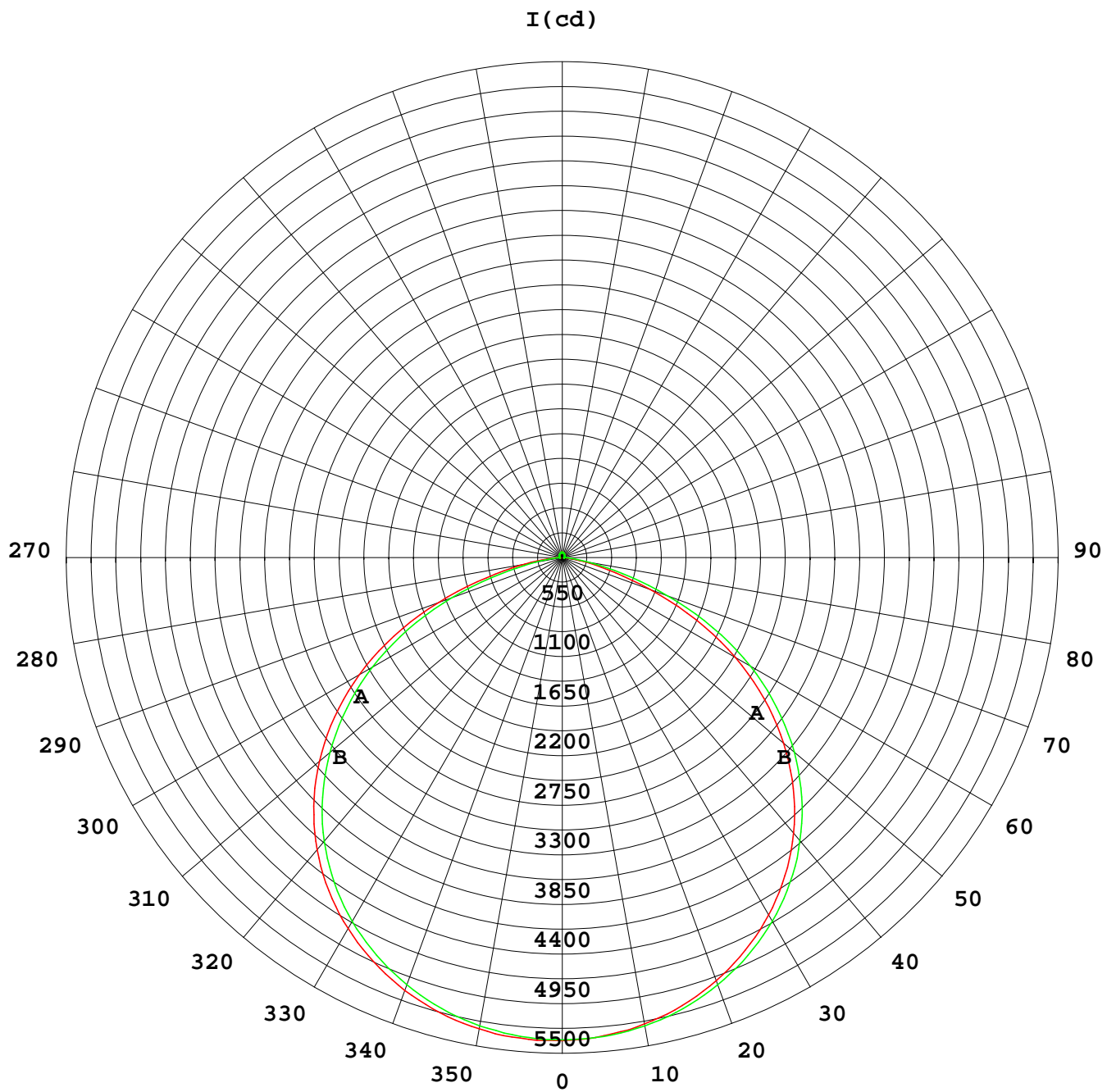


**Photometric Data Table [cd]**

69.0	1478	1525	1587	1610
72.0	1117	1165	1223	1247
75.0	786.4	828.8	873.7	892.8
78.0	511.8	551.2	591.4	605.1
81.0	296.2	321.3	357.0	371.5
84.0	137.4	154.7	175.8	185.1
87.0	62.48	67.27	74.53	78.18
90.0	31.15	30.27	30.71	32.84
93.0	20.14	16.43	15.31	15.63
96.0	17.27	16.76	16.80	17.40
99.0	18.05	17.93	17.91	18.44
102.0	19.65	19.47	19.32	19.38
105.0	21.38	21.33	21.19	21.02
108.0	23.15	23.02	22.96	22.83
111.0	25.33	24.96	24.61	24.31
114.0	27.38	27.02	26.26	26.07
117.0	29.51	28.93	28.18	27.87
120.0	31.60	30.81	29.81	29.71
123.0	33.32	32.34	31.52	31.50
126.0	35.07	33.94	33.15	33.13
129.0	36.42	35.42	34.79	34.85
132.0	37.69	36.96	36.57	36.59
135.0	39.01	38.61	38.30	38.33
138.0	40.66	40.27	40.08	40.06
141.0	42.41	42.06	41.98	41.99
144.0	44.29	43.94	43.85	43.83
147.0	46.16	45.86	45.59	45.62
150.0	48.07	47.77	47.45	47.43
153.0	49.98	49.68	49.30	49.28
156.0	51.87	51.53	51.15	51.13
159.0	53.72	53.42	53.05	53.02
162.0	55.51	55.18	54.90	54.87
165.0	57.14	56.86	56.64	56.61
168.0	58.66	58.35	58.14	58.13
171.0	60.01	59.72	59.45	59.44
174.0	61.21	60.97	60.71	60.62
177.0	62.15	62.05	61.84	61.75
180.0	62.79	62.81	62.67	62.49

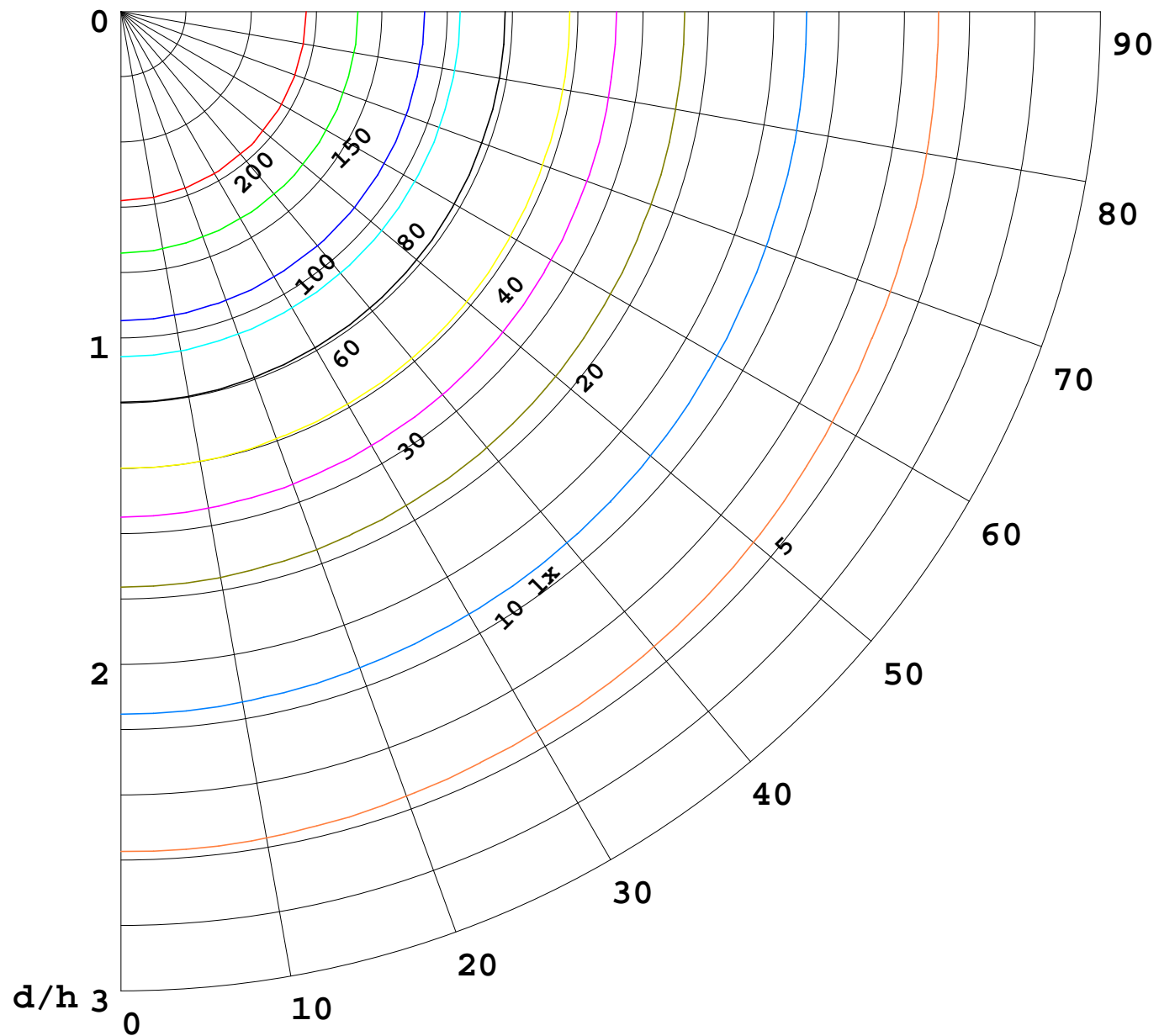
**C Range: 0 - 360DEG**  
**C Interval: 15.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: AHK**  
**Test Date: 6 OCTOBER 2018**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.351**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=1.0000]**  
**Remarks: HB2000-100W-A100-G5 288Chip\_110D#1\_18080**



1000 lm

$K = 1$



**$F$**      = 1000 lm  
 **$K$**      = 0.7  
 **$H_{cc}$**    = 0.8 m  
 **$H_{fc}$**    = 0.0 m  
 **$E_{ave}$**  = 100 lx

	<b><math>P_{cc}</math></b>	<b><math>P_w</math></b>	<b><math>P_{fc}</math></b>
—————	70	50	30
—————	50	30	20

